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UBISOFT CONQUEROR OF WORLDS

YVES GUILLEMOT ■ PUNCHDRUNK ■ PROJECT CARS 2

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SEPTEMBER 6TH
DESTINY 2
Guardians, prepare for battle

SEPTEMBER 15TH
DISHONORED: DEATH OF THE OUTSIDER
DLC-quel? Expandalone? Good?

SEPTEMBER 29TH
CUPHEAD
After what feels like forever, we finally get this hand drawn marvel

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NATIONAL COFFEE DAY
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SEPTEMBER

DICE Europe 2017
September 10th - 12th, various venues, Cascais, Portugal
diceeurope.com

Pocket Gamer Connects Helsinki 2017
September 19th - 20th, Wahna Satama, Helsinki, Finland
pgconnects.com/helsinki

VRDC 2017
September 21st, Hilton San Francisco, Union Square, CA, USA
vrdconf.com

Austin Games Conference
September 21st, Austin Conference Centre, Texas, US.
austingamecon.com

OCTOBER

Game UX Summit 2017
October 4th, Ubisoft Toronto, Toronto, Ontario, Canada
epicgames.com/game-ux-summit

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When: September 21st - 24th
What: This biggest games show in the UK featuring all the newest triple-A and indie titles
egx.net/egx

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DEVELOP #187
SEPTEMBER 2017
It's the start of what the games journalism sector likes to call the 'silly season'. With big releases all vying to be played, we'll continue to get the best news and interviews

DEVELOP #188
NOVEMBER/DECEMBER 2017
Once again, Develop will spend the end of the year highlighting recruitment. As a new year starts, is it time for you to look around and find something new? Or do you need new talent? We'll have all the best advice here.

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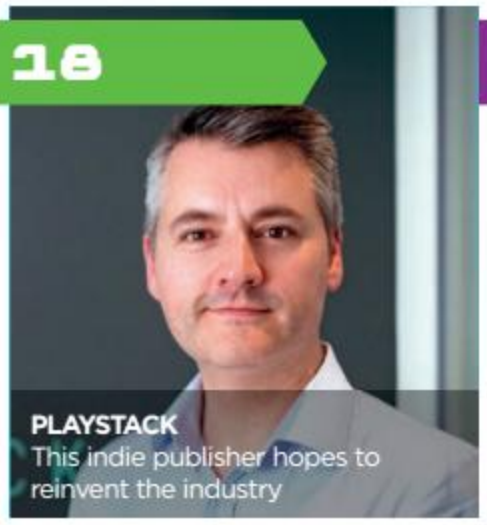

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Editorial

And so passes another Gamescom. Which means it's officially Chrismas now. Or may as well be. The next few months will feature a steady supply of new releases, arriving at an uneasy rate.

I like to refer to this time of year as 'the descent into Christmas', with 'descent' in this case being less 'plummeting into hell' and more 'lowering into a warm bath'. Pleasant, if a little self indulgent.

The number of fantastic looking games coming out in the next few months means that a lot of you are no doubt hard at work tightening up the graphics on level three before launch. I wish you all the best of luck and can't wait to experience the fruits of your labours myself.

It was great to return to Gamescom again as a journalist this year and witnessing the intense hive of busy, buzzing gamers – and I didn't even make it into the consumer halls.

> **Everyone's so busy making games. Which is fantastic. The more games are out there, the more good games are out there**

Everyone's so busy making games. Which is fantastic. The more games are out there, the more *good* games are out there. A very different feel to my first German trade show (Leipzig Games Convention, RIP). More games. More craft. More creativity.

More *personality*, too. The increase in accessible tools means that now it's easier than ever for people to make the crazy worlds inside their head.

Jem Alexander
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SOCIAL LIFE

Nintendo is closing down another of its social experiments, Miiverse. It's the latest in a long history of abandoned social functions in both home console and handhelds. **Jem Alexander** ponders whether any social gimmicks can cross console generations and, if so, which one

Nintendo is closing down *Miiverse*. In November, the social service on Wii U and 3DS will implode and life for many millions of Miis will end. It's nice to picture a spectacular cosmic event for something like this. 'Nintendo is destroying your Miis' universe'. Paints a different picture to when Sony closed down *PlayStation Home*, doesn't it?

It does highlight an industry trend, though. Platform specific social networks come and go with relative ease, rarely transitioning across console generations. *PlayStation Home* itself is an interesting example. A virtual space that lived on every PS3 owner's console. An in-built audience of millions to whom brands like Diesel and Warner Bros could market their clothes and films.

Every game was to have its own special zone, with playable mini-games. Some would include concept art and in-game assets. Like a mini museum. Had *Home* survived, it could have been a fantastic way of conserving game history in an interactive format. When the service was announced, there was even promise of every player having a trophy room with 3D representations of all of your in-game accomplishments. This was before PS3 trophies even existed. Such grand promises, made at a time when games like *LittleBigPlanet* were just being announced. The future felt so exciting. So social.

But, as ever, dreams come crashing to the ground once reality kicks in. The PS3 was a pain to develop for – this is widely documented – on top of which, the *Home* engine was even more annoying to work with. The work required to make a *Home* space, and the investment needed, was huge. The trophy room never materialised (creating a unique 3D asset for every trophy was a nice idea, but costly in practice) and launching into/out of games from a party in *Home* was clunky at best.

Remember all this? It's possible you don't, because *PlayStation Home* never made the jump across to the PS4, despite actually being pretty profitable. Just as Nintendo's *Miiverse* dies, abandoned, on the Wii U. It's a different story for Nintendo, obviously. There were no grand promises of complicated explorable game spaces. Instead we were delivered a fairly basic forum on which you could draw. Though it did integrate with some of the Wii U's more high profile games, drawings and all.

Which reminds me of another Nintendo 'social platform' abandoned between console generations. *PictoChat* was a pretty strange thing for a company as kid-friendly and paranoid as Nintendo to have created. It allowed for text chat and the swapping of drawings with anyone else with a DS within local wifi range. Great for random strangers to send the odd "A/S/L?" or inappropriately shaped picture drawn on their tiny DS touchscreen.

There's no reason *PictoChat* couldn't have made the transition over to the 3DS. The device format was identical. Think of all the inappropriate drawings you could send to strangers, but in 3D! Another social experiment lost to console history.

As Nintendo moved on to the 3DS, *PictoChat* was scrapped in favour of the greatest social featureset the games industry has yet produced. *StreetPass* still remains utter genius. Even after attempts by Nintendo to monetise the platform by selling new *StreetPass* 'games', sentiment around the passive social connection tool has stayed very high.

> **Think of all the inappropriate drawings you could send to strangers, but in 3D!**

By simply carrying around your 3DS, you'll 'interact' with other 3DS players you pass by. By walking with your 3DS you earn coins to spend in *StreetPass* games. The message is clear: keep your 3DS on you. It promotes social play, healthy living and gives the player a shot of endorphins whenever we see that flashing green light. The same chemical hit we get when we receive a text message. Nintendo had basically invented location-based dating apps, years before Tinder.

So why, oh, why was *StreetPass*, like its younger sibling *Miiverse*, left to die on old hardware? The latter is understandable, considering the low userbase of the Wii U and Nintendo's change in direction with the Switch, but the 3DS enjoyed huge success and fits much more squarely with the Switch's overall philosophy. The best of home console meets the best of portables. And *StreetPass* truly was the best of portables.

Did you know that the Nintendo Switch has a notification light built in? Behind the home button. Weird right? Would be just the thing to alert us to a new *StreetPass* hit... The Switch *is* lacking in social features and if anything deserves continued support beyond the death of the 3DS, it's *StreetPass*. And that so-far unused notification light would be just the thing to keep those endorphin hits coming. ■

FROM DARK TO **LIGHT**

Sean Cleaver was an early adopter of The Long Dark. Now the game has come out of Early Access and Game Preview, he takes a look at the evolution of the game's UI during the programme

UI is very important in a game, and the evolution of it is something that is rarely touched upon. Mostly, because when we get to see the game we've approached what the design team believe is the best version for release.

I have to admit to it being a little fascination of mine, especially when it comes to games that fall into the bracket of PC to console conversions. More often than not those games, mostly survival games and world builders, come from Early Access.

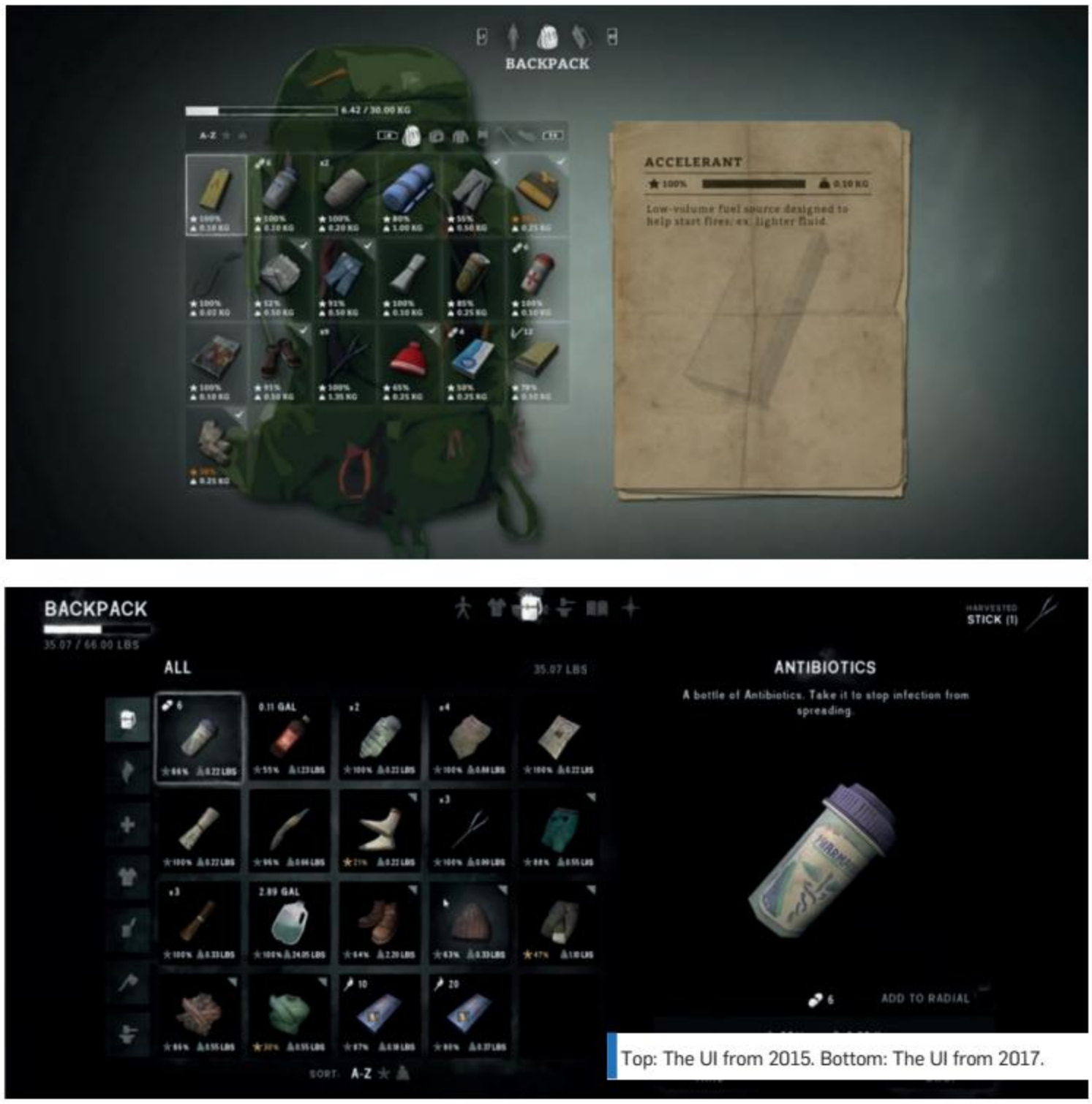
Which is why it has been utterly refreshing to see Early Access done right when it comes to *The Long Dark* from Hinterland Studio. Games do improve over time in the programme (as well as the Xbox Game Preview Program) of course, but seeing how a game experiments with its components over time is fascinating. So forgive me if this is a bit like 'show and tell'.

The Long Dark is a great example because its the first time that I as a primarily console gamer, have been able to experience these changes as they occur.

The two screenshots to the right show the difference between versions: The first is from the inventory screen in the game as it was in late 2015. The second is from the game now, upon full release in 2017. This particular part of the inventory screen, the backpack, shows all of the little changes that have optimised the experience of using the menu.

The text, for example, has changed between the two, becoming more consistent throughout. Colour has taken a much more prominent role. The star that indicates the wear level of an item has become clearer, changing its colour away from that of the text. The item boxes are not only larger and better spaced on the screen, but also much better defined in how they are highlighted.

The biggest change is in the way that items are expanded. In the first shot, you'll see the item description on an aged piece of paper with a light drawing of the item on it. Now, the paper is gone. Instead, the item itself is now displayed in full 3D with the stats spread across the space much better than the previous, very linear style from 2015.



Top: The UI from 2015. Bottom: The UI from 2017.

UNDERSTANDING INVENTORY

If you've played any kind of RPG or survival game, inventory management is arguably 30 per cent of the whole experience. And even then, that time is spent identifying what is actually useful to your experience and what can be dumped, cashed out or recycled for materials.

One thing you do not want is a stale and bland experience. Menu upon submenu will quickly turn off a player. Optimisation and thinking about your control method is not only key, but can open many creative doors.

Recent releases have showed us many variations on the inventory management UI. Games like *7 Days to Die* and *Final Fantasy 12 HD* use the grid puzzle which makes an interesting (if not controller friendly) mini-game out of the experience. Then you have the kind of UI that is a straight port from a PC game like *ARK: Survival Evolved* or *Conan Exiles*, which is functional but incredibly fiddly and very overwhelming.

Seeing the UI evolve in *The Long Dark* through the Game Preview programme has been something of an education. As a long time gamer, it's easy for me to adjust to different control schemes and menus. But slowly seeing how everything in this game has just got that little bit better, that little bit more refined, has been a wonderful experience.

Now if only they'd map pause to the start button, that'd be great. ■

THE 'HOLY GRAIL' OF SOCIAL VR

Developers are still figuring out the virtual reality market, just as users are figuring out how it fits into their lives. **Tanguy Dewavrin**, CEO of social VR company Atom Republic, discusses VR's social potential

Among the many grievances virtual reality haters will often bring up, the fact that VR is an isolating experience is probably the top criticism (alongside the motion sickness!).

I can see why anyone would feel (and look) antisocial with that huge cumbersome headset: most current VR platforms cut players off from the rest of the real world in order to immerse them in a virtual one. This is often the case, until that virtual world is a massively multiplayer experience. In which case, you invert the paradigm: suddenly the VR headset is not a social blindfold, it is a lens. A window through which you can see users from all over the world.

For the past 5 years I have been predominantly focusing on developing virtual worlds, which gave me the opportunity to observe how people, often strangers in real life, socialise and interact online. It's been a fascinating journey. As I aim to continuously improve the players' experience from different angles, technology is something I always experiment with. VR seems the obvious feature that could greatly enhance a virtual world. My quest is to discover the best way to integrate VR, enhancing and not disrupting the social experience.

Developing for VR is, of course, not without its technical challenges, mostly on the design side: most virtual worlds use text chat, but how can you type on a keyboard if you wear a VR headset? My initial solution is to rely on voice chat if the player is using VR, but I will then experiment with virtual keyboards, using hand tracking devices like Leap Motion. Comfort is also an issue: social players tend to spend hours chatting with other players: would they still last that long if wearing a headset? Would their sessions be shorter?

Most important are the business elements: the elephant in the room is the VR market. Is it ready? How do I fund a VR implementation in a free-to-play game? Is it worth spending months developing a VR version for a target audience of only 1 million PS VR users, or should I instead be catering for the needs of 60 million non-VR PS4 users?

There have been a lot of notable social VR experiments. Some are in early development, like *Facebook Spaces*, or *SteamVR Home*. Others are more advanced, like *Project Sansar* and *VR Chat*. If *Project Sansar* is progressing well, is it because it found its audience, or because Linden Labs can afford to fund it? The termination of *Altspace VR* could indicate that it's too early for Social VR.

I hear that VR players are the more hardcore players, more into FPS or action games, and therefore not interested in social and casual games. But is it not because those are just the early adopters of the technology? In which case I would argue that the future of VR *is* social: surely, soon the audience for VR will not be limited to games, but destined to expand into virtual worlds and serious simulations.

> **Ultimately, my long-term goal is to expand the horizon of social immersion**

Ultimately, my long-term goal is to expand the horizon of social immersion, for players from all over the world, on any platform imaginable. I created *Atom Universe* as the first and only cross-platform virtual world, with a focus on social interaction. Currently my PS4 players can not only meet 60 million PlayStation Users, but also 160 million Steam users, and vice-versa, and I'd love to expand this to more platforms. The next step is to make this experience more immersive: wouldn't it be more compelling to meet your friends face to face, in 3D? Players spend so long customising their avatar, they want others to be able to inspect it up close: hairdo, matching outfit, super-swag jewellery. Using Unreal Engine 4 allows us to quickly prototype VR across PlayStation VR, Oculus Rift and HTC Vive: the results have been very promising so far.

Social VR will remain my Holy Grail: I will implement it, but it has to be done right. It will take time, but it will be the cornerstone which joins the two core pillars of my edifice: social interactions made immersive with VR perspective, and the VR medium made social by connecting users to the outside world, rather than locking them in.■

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STATE OF THE UBION

Ubisoft CEO Yves Guillemot wants to disrupt the games industry at every turn. Financial gain is an important goal, sure, but it's the creative freedom and experimentation that interests him more. **Jem Alexander** finds out how a diverse, free environment makes Ubisoft one of the most creative developers on the planet

Coming off the back of a killer E3 showing, Ubisoft's position is looking pretty strong as we move into the Christmas period. Response to *Assassin's Creed: Origins*, which enjoyed an extra year in development while the franchise took a year off, and *Far Cry 5* has been positive. Meanwhile, *Mario + Rabbids Kingdom Battle* transformed from a chuckleworthy rumour into one of this year's most anticipated games and *Skull and Bones* looks like it could replicate *Rainbow Six Siege*'s games-as-a-service success, albeit in more piratey waters.

Leftfield titles like toys-to-life reinvention *Starlink: Battle for Atlas* and VR experiment *Transference* are more immediate examples of Ubisoft's unique creativity and quirkiness. Better examples of what CEO Yves Guillemot refers to when he talks about 'disruption'. It's a word that left his lips a lot during a recent press event in China, and one that is important to the company going forward, he explains:

"We use disruption as a way to try new things. Because when a market is mature, it's very difficult to change things. When a market is changing, you have lots more opportunities, so if you want to enter a genre or if you want to do something new and different, you can use a big transition to create it."

This idea of taking advantage of new tech or genre shifts isn't new for the company. Ubisoft has a history of releasing titles - even exclusive ones - alongside new console launches, or experimenting with new tech like VR or motion controls.

"If you really bring quality then you could be original enough to install a brand that will give you a chance to create games in that genre for a long time," Guillemot says.

The games industry is going through a huge amount of change and transition, from VR to the likes of the PS4 Pro and Xbox One X, all the way to the triumphant return of Nintendo with the Switch. For a company like Ubisoft, they're like kids in an opportunity shop.

"We have the chance to be in an industry that is growing a lot, and that brings lots of new opportunities regularly," says Guillemot. "The market being in a state of growth gives new opportunities, and due to the fact that we now have connected machines, that's helping us to create different types of games, to launch new IPs, and to give lots of freedom to our teams to express themselves."

GAMES AS A SERVICE

This move online towards a games-as-a-service model, which more and more titles across the industry are taking advantage of, is just one area of that Ubisoft is looking to disrupt. *Rainbow Six Siege* and *The Crew* are early success stories for the publisher, though other experiments like *For Honor* haven't necessarily hit the mark with players. Though failure isn't necessary something Ubisoft fears.

"It's important that no-one here is blamed for being too creative," says Guillemot. "The goal for us is to make sure that we reward new ideas, so that people feel that they can try and that they can fail. If they are allowed to fail, then they can take more risk. If you can't fail, you don't take enough risks and then you never come up with anything new. Anybody can fail, but what's important is to learn as much

as possible from that, so that next time we come with something that is well adapted and that will be different and outstanding."

Coming back to the notion of 'disruption', entering a new area of the business and changing the direction of the games industry is a great way to mitigate against any risk. This means that the developers at Ubisoft never have to compromise their vision by making anything less than triple-A. Ubisoft remains very much in the triple-A space, and has no intention of shrinking its ambitions to save a bit of money.

"Disruption diminishes the risk," Guillemot argues. "If you are fast and efficient when there's a disruption, you have a chance to have more freedom. But only if you are early enough, because if you wait too long it's not disruption anymore. Gamers want to try something new and they are a lot more open when something is new.

They want something different from what they have been playing, so in a way it's diminishing risk for us. Even if it's a lot more risky in terms of creation, at the end of the day it's less risky as a business. We chase those moments, because for the creators in the company it's a lot more rewarding and you can try new things. You can make something you've been dreaming of for a long time. We love those moments."

The ubiquity of the internet and always-connected consoles also have an impact on Ubisoft's approach to world building. "The fact that these machines are always connected gives us the possibility to create worlds that will be alive," says Guillemot. "Worlds that can change with events, people and actions. We have a strategy to create a coherent world first, then to put mechanics and systems in the game to make that world more alive.

Then add characters and decide when and what is happening in that world. So at the beginning you define the playground, and after that you give players a chance to live a certain adventure or a certain experience. But as it's a coherent world, as the creator of that world you won't automatically know what players will do. You give them the tools for them to find opportunities to express themselves, to do things together with friends or alone.

That is something that is really interesting with connected machines."

DIVERSITY

When asked about Ubisoft's apparent attempts at world domination, with new studios springing up on a regular basis, Guillemot was keen to highlight the company's diversity as one of its main strengths.

"Being in many countries helps you to create products that are influenced by the global population that you have in your studios," he says. "It makes those games more multinational, and that's an important thing. The more global you are, the more you are influenced by the countries you are in and then your games have a little bit of everything. It means they are more appreciated by players worldwide.

"The more nationalities you have in your studios, the more different the people are and the more it's natural to represent those different people in the games. So that's what we have been doing, making sure we have more women in the core teams, for example. We have people from all over the world, different religions, different way of seeing things, different ways of living, and that automatically translates into the games."

Representing as many players as possible is something that Ubisoft is eager to push for, as the studios still see this as an issue the industry needs to fight against. "We are careful about that," says Guillemot. "As an industry we used to have 90 percent of players that were male. So we had bad experiences with certain characters that, because they didn't fit with the people who were buying the games, gave the impression to the industry that only certain types of character would fit with the demand. But we have seen great evolution, in the mix of different players first, but also in the acceptance of the types of characters that you can have in games. We push it more than what the market can accept, which is more and more nowadays."

> **Some people want to follow, but we prefer to take the ones who really have a goal to change the industry**
>
> *Yves Guillemot*
> *CEO, Ubisoft*

But it's not just players who are encouraged to express themselves; freedom for developers to do the same is something that's central to Ubisoft's company culture. "Our goal is to put in place the conditions that will give everyone a chance to express themselves and show their strengths, continue to learn and create things they're proud of," Guillemot explains. "We want people to have a chance to do what they are good at and really have the feeling that they can grow in the company and get better and better. Produce games that they are proud of. We try to take people that want a certain level of freedom and want to continue to progress with time. That have a need to succeed and create something that they will be proud of.

"Some would say everyone is like this, but no. Some people want to follow, but we prefer to take the ones who really have a goal to change the industry, to disrupt things a little bit. So the type of people that we recruit makes a difference. It's also very important to give each studio enough freedom in the way it creates so that it can lead a project at one point. It can really show what it can do. We try to make sure that you aren't dependent on too many people so that you can have true freedom of creation and expression." ■

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John Broomhall talks with composer & audio director Stephen Baysted

HOW DID YOU JUGGLE YOUR HIGH-LEVEL MUSIC ROLE WITH AUDIO DIRECTION?

The secret is hard work and unerring focus. On *Project CARS 1* there were just two audio designers - me and Greg Hill - so I was shoehorning music time in here and there across the development cycle. For *PC2*, I had a larger team of designers and programmers, initially focusing on sound design, updating middleware and modifying pipelines. I cleared four months to concentrate just on music.

TELL US ABOUT PROGRAMMING AND TECH...

We were fortunate having two extremely talented audio programmers for our final year overseeing integration of new middleware (REV), updating existing tools (FMOD) and coding custom DSP. For engines there are two principal approaches: crossfading loops from steady-state recordings under load or granular playback of acceleration and deceleration 'ramps'. In *PC2* we use both, overcoming the inherent drawbacks in each. Middleware choice has a significant impact and FMOD studio played an important part, enabling us to mix the entire game as well as individual cars 'live'.

WAS THERE AN OVERALL AUDIO 'MANIFESTO'?

To create the most immersive, exciting aural experience of driving a simulated racing car. It's not an arcade racer so our goal: represent car sounds accurately and convincingly but, pragmatically. Players need certain sounds there to actually play the game successfully, sounds they wouldn't necessarily hear in reality – like tyre scrub and skids – a primary indicator of loss of traction, grip and even onset of an accident. Conceptually, other psycho-acoustical questions present themselves: what do racing drivers actually hear, given a fireproof balaclava, earplugs with radio transponders, and full-face helmet? All have significant impact on both amplitude and frequency range.

HOW DOES MUSIC FIGURE?

Not during gameplay – it would interfere with principal auditory mechanisms necessary for actually playing the game and might shatter immersion. Musical 'impact' must happen within the menus - the underlying concept to get inside the racing driver's mind. These gifted sportspeople who with raw determination, skill, and inner strength, go all-out to win at almost any cost, and capturing a sense of racing at the highest levels of motorsport: adrenaline coursing through veins, extreme physical challenges, psychological and emotional pressures, ever-present danger and conversely the thrill, elation and rewards. It's an epic cinematic score but also has reflective, meditative moments. There are also additional layers of real-world non-musical sounds ('pit to car' radio, engines, trackside ambiences) to help further immerse you. Several tracks also feature interviews with Ben Collins (the *Top Gear* Stig, and race engineer voice of *Project CARS 1 & 2*) speaking candidly about the cut and thrust, plus what made his idol Ayrton Senna unique.

HOW WAS RECORDING AT AIR STUDIOS?

An absolute joy and privilege working with some of the world's finest musicians at a world-class recording studio. The sessions went remarkably smoothly thanks to good preparation and an amazing team. I've worked on several film/game titles with The London Metropolitan Orchestra so director, Andy Brown, knows how I like organising sessions and setups. Orchestrator Simon Whiteside translates my midi mockups to score whilst ace engineer/mixer Jake Jackson ensures recording sessions run like clockwork. ■

John Broomhall is a game audio specialist creating and directing music, sound and dialogue
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PUNCHDRUNK KIDS

An immersive theatre company is using video games to blur the lines between digital and real, transport school children into a mythical world and teach them a little maths along the way. **Jem Alexander** finds out more

Immersive theatre company Punchdrunk continues to experiment with ways of integrating its unique style of performing arts with education and digital platforms. Its latest project, *The Oracles*, is an educational campaign aimed at primary school children aged five to eleven that mixes real world immersion with video games.

This mixture of video game and real world experience allows the kids, who play the game together in class during school time, to be introduced to the world of Fallow Cross digitally before being physically taken there. The game is a relatively simple first-person adventure, played on tablet, which allows players to explore the small town of Fallow Cross. The town has been abandoned after the mayor, Hercules, was killed (pretty dark for a kids' game!) and the player soon begins to uncover a mystery about an evil sorceress who tormented the townspeople with her weather magic.

While they do this, the kids are gathering mint (good for fresh breath and sealing away evil weather-mages, it seems) in a collaborative environment with a hint of competitiveness. Even though each child has a tablet to themselves (they don't know they're born, etc...) a central screen will announce when each player finds some of the hidden herb. Once one player has reached a certain point, the fourth wall is broken and the game designer's hidden message requests that they come help save the real town of Fallow Cross and begin their Punchdrunk adventure.

"We've had a really positive response," says Matthew Blake, lead designer on the project. "Some of the teachers have been playing along really well and saying 'no, you're not going, it's too dangerous,' and the children wrote an email to their head teachers, laying out all the positive reasons why they should be allowed to go. Such as 'because we are learning empathy, because we are working well as a team. We are improving our skills every day, if we don't help these people their village will be destroyed!'"

Once they finally 'persuade' their teachers to let them go, the students visit the real Farrow Cross at Punchdrunk's office in Tottenham Hale. Here they have a space called The Village, which the company created to explore and experiment with different ideas.

> **We're exploring this replica game and this intuitive physical space and how you can connect the two**
> *Peter Higgin, director of enrichment, Punchdrunk*

"The village is a private space for us to explore certain ideas," says Peter Higgin, director of enrichment and of Punchdrunk Village. "At the moment we're exploring *The Oracles*. We're exploring this replica game and this intuitive physical space and how you can connect the two. But every single structure within this space holds or embodies a future idea for us."

The Village symbolises the future of Punchdrunk and many of these experiments could go on to become full experiences, in whole or in part. "Essentially it's a space where we're trying to flesh out new ideas for the company," Higgin explains. "Some of them are going to go on and become shows, some of them are just sensory works that we're interested in, which could become nothing, or it could help us tease out an idea elsewhere. Across a lot of the future work we're exploring we are thinking about how you

A student places the last of Hercules' twelve labours into Fallow Cross' central fountain

integrate digital technology, or gaming or game mechanics."

IT TAKES A VILLAGE

Once the kids have arrived at the Village, the mint they have collected in the game is magically sent to the real world, allowing them to cast a spell together and create protective lanterns. These lanterns are a large part of the tech Punchdrunk is experimenting with. Even if that means *technically* electrocuting children.

"It's a very, very low non-electrical current. A very low level signal, sent through the body to your hand, to the touch of your skin," says Higgin. There is zero danger whatsoever.

This technology allows Punchdrunk to track positioning and variable data in a physical space in much the same way as in a video game. It's the reason they've been working with an external team in order to integrate the tech with their performance.

"We've been working with Google Creative Lab, based in Sydney," says Higgin. "Together we have been looking at how do you make an intuitive physical space. When you play a game, the game knows where you've been, it logs how much mint you've got, it knows what level you're on, etc. What we've been trying to do, and are beginning to explore, is how can a physical space know who you are, know where you are in the space, and know what theatrical content it should deliver to you, based on where you are in the game world. That's the ambition.

"We've been working with a technology called ultra-wideband, which is a new unwieldy technology.

> **The teachers have been playing along really well**
> *Matthew Blake, lead designer*

Essentially, it can do the job of knowing who you are and where you are. So we've been using it in magical objects, and in the lanterns. When that tech works properly, the physical touch of touching that door handle outside the mayor's house will either unlock or not unlock the door depending on certain variables. What that simple proof of concept has allowed us to do is to build a system whereby we can sense where they are in the space, send that to a game server, and that also sends information to the game. It can talk to the game server, and can influence the game, and then it also sends information to Qlab, which is our theatrical cueing systems to fire sound and lighting."

What this means is that the entire space is automated. There's no-one backstage cueing the events that take place while the kids are in Fallow Cross. It all runs on game logic. But it also means that when players make choices within the physical space, the consequences are displayed within the game world on their tablets. The children come back to Fallow Cross a few times, to find the dead mayor's 'labours'. Twelve magical artefacts (based off the labours of Hercules, of course), which will bind the evil sorceress away when placed in the fountain at the center of town.

The kids have the choice to place each labour within the fountain's slots in whichever order they wish. This is then visible when they return to the classroom and play the game, in a similar way to the digital mint the collect becoming real when they return to the village. Blurring the lines between digital and physical like this creates a personal, intimate connection to the world.

The potential of this technology feels quite limitless when you extrapolate it out to more adult Punchdrunk experiences.

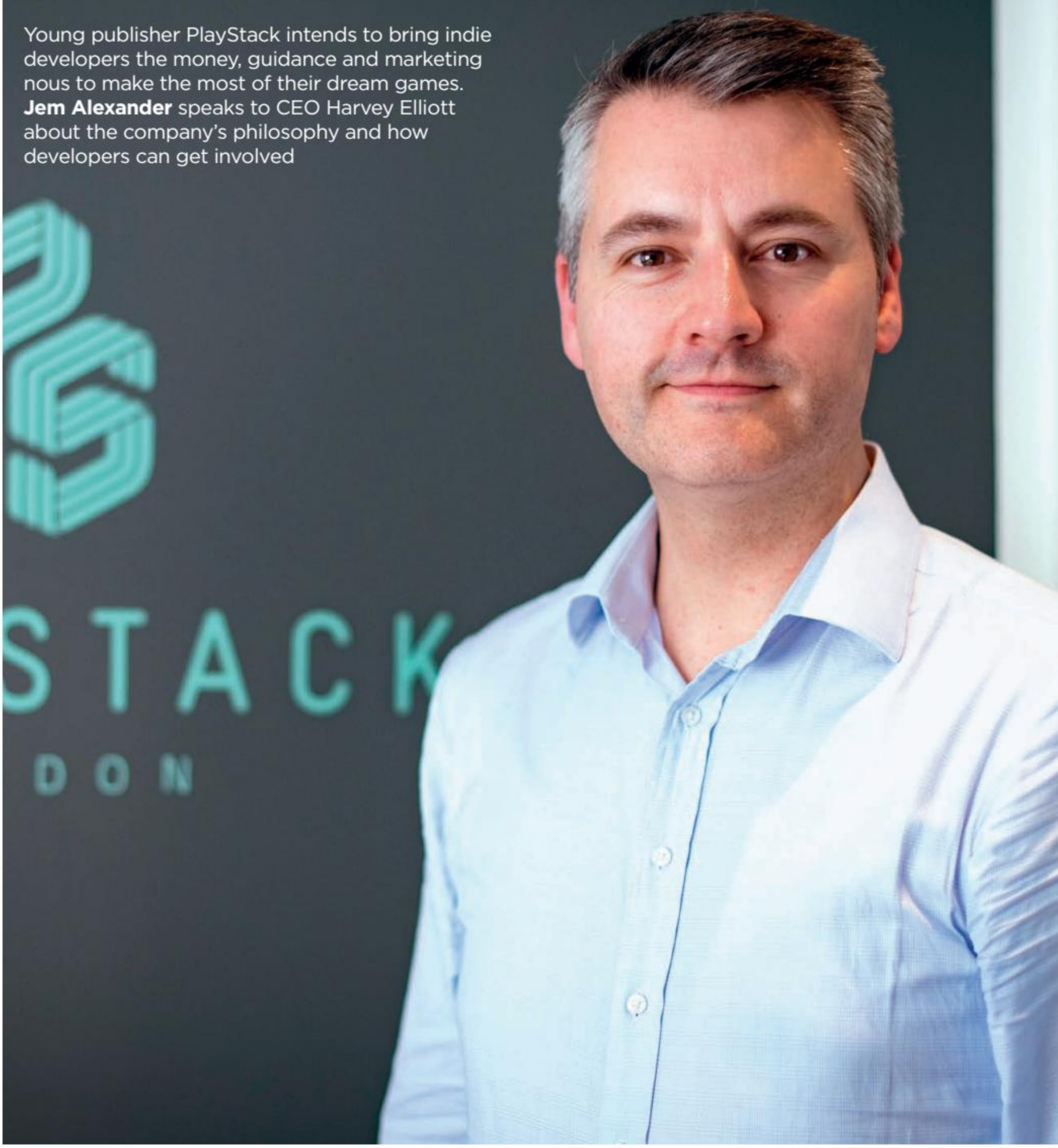
Blurred lines between game and reality also heightens the realism. The thunder and lightning (automated through the village's game logic) can be quite scary for the kids, because they're immersed in this world. But they're also well aware that, as long as the light of their lantern shines blue, they're perfectly safe. Which is why some of them spend more time staring at the lantern than they do at the puzzles.

These puzzles are the real educational meat of the experience. By solving maths problems set in various shops and houses around the village, the kids get a peek into the lives of the inhabitants and an opportunity for some cooperative puzzle solving. Only by working together and discussing the problems, helped along by the Punchdrunk performers (who over the course of the three visits, the kids become very familiar and friendly with), the village of Fallow Cross can be saved.

As long as they can keep their eyes off their lantern... ■

REINVENTING PUBLISHING

Young publisher PlayStack intends to bring indie developers the money, guidance and marketing nous to make the most of their dream games. **Jem Alexander** speaks to CEO Harvey Elliott about the company's philosophy and how developers can get involved



"We set up to reinvent the games industry," says PlayStack founder Harvey Elliott. The publishing outfit has only been around since April 2016, but Elliott's goals remain lofty. "There are a lot of things in the games industry that we think are broken and we are trying to fix them."

These problems – at least the ones PlayStack is attempting to fix – relate to independent developers attempting to get funding, publishing deals and advice bringing a game to market.

"Smaller developers struggle to get access to funding," Elliott says. "They might have the best game in the world, but they can't fund it. And when they get funding, it's usually just enough to finish the game but not to take it to market. Then they probably don't have the expertise to scale the game, because they're not necessarily marketeers. They're people who have made a great game, a work of passion. Then if you have a game that maybe does start to break through, how do they scale it to be a significant game in the industry?"

PlayStack has many plans to fix all of these problems and is now actively looking for developers to partner with in a unique arrangement that fits with them. "Most publishers have their model which they'll apply to you," Elliott explains. "You don't get to choose the right thing for you as a developer. We want to work with the development teams and integrate with them. We'd rather become part of the team stand-up, and be part of their game development pipeline, than have a milestone dropped every six to eight weeks which we review and sign off.

"It's got to feel more like a partnership between us and them. If we're advancing money or funding them, that's great. We get to recover that, but any profits will only come when the developer's making profits, so in terms of any success, we have to be successful for that to work. I think that alignment's really important."

A connection to the developer and the project is so important for PlayStack that if someone within the team feels strongly enough about a game, that excitement can propel that game towards a deal. "I say all the time that 'we're not a democracy, we're a dictatorship'," says Elliott. "What I want is a passionate voice for a game in the team. It may be a completely opposing view to mine, but if they're going to be a passionate force for a game and champion it, then that's going to be more valuable to me than a few people saying they like it.

"We have play sessions every Thursday; every game that comes in, the whole team is invited to play. We have some sofas in the office, we pull them around, gather round, play the games, talk about what we like and don't like, ask questions and create a nice cycle of reviewing and playing titles. The team are gamers, as you'd expect in any games publisher."

FINALLY FINANCE

Part of what makes PlayStack different from other publishers is its access to a large amount of capital. "We've set up a fund so that private investors can put money into a games fund to invest in development," Elliott says. "And we've set up a marketing fund, so that if we think that a game's going to be successful, we've got lots of capital to back it with.

"We've devised a structure where we can invest in companies, give them financial support, give them structural support, get them board and governance and all the relatively boring bits of the world sorted and dealt with, so they can focus on making games. And they get to be the CEOs and run their companies, but we want to help them grow it into a proper infrastructure. It's rewarding to do that.

"We may be a small publisher – we have about 25 people in our team – but it's the financial resource that we've got that makes the difference. We've got a real edge with that. People will be successful and there's plenty of room in the market. There's plenty of room for games and apps and content to come through, so now it's just about finding the best ones to give them the best voice."

THE HUNT IS ON

PlayStack is now at a place where it is actively seeking out development talent to partner with. Everyone on the team is keeping an eye out and developers can contact Rob Crossley directly if they want to be considered.

"We've recently appointed Rob," says Elliott. "His job is head of developer partnerships, so his role is to help build partnerships with developers, to find people out there, so he's an easy place to start and get in touch. From there they can access all the people in the company, so let's overload his inbox as a starting place.

"It's really important to meet with developers and find out what they need and what they want, and in return they'll get to hear our view of what they're doing. They'll get honest answers about what we think and whether it's something that we can work with."

Every developer who signs with PlayStack has the freedom to work with them in a unique way. "They can choose to work with us in everything," Elliott says. "They can take advantage of the investment fund and publish and scale, or they can choose to dip in and out of the things that work for them and work for us. The job really for us is to fit around what the developer needs, rather than saying 'here's our solution, take it or leave it'. Because we believe we'll find the best in each of the developers because of it. So we've set all that up since we started, we've signed eight games and companies. A few are in soft launch at the moment, one VR game is out live and selling, and then more to come over the coming twelve months. Everything we want to do is set up, now we're looking to scale it all. So we're out looking for developers.

"It's quite dangerous, we'll talk to anyone on any platform at any stage on any budget. What we recommend is that people have really thought through their ideas and ideally have prototypes. They have built their game and shown what it can do. We're happy to meet developers with concepts and talk about it, but they'd need to have such a phenomenal track record, background. That might be harder for many people to put together. So we'd normally want to see prototypes. We have done some prototype funding, so if we absolutely utterly believe in the team we can support them, but if I was giving them their best shot, they'd want to come in with something which shows the intent of your game. Lots of ambition, but something we can start to get our hands on and around, and then get into a dialogue with us." ■

You can contact Rob Crossley and pitch your game to PlayStack here: ***rob.crossley@playstack.com***

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Olivier de Rotalier, managing director of Ubisoft Singapore, Ubisoft Chengdu and Ubisoft Philippines

GLOBAL COLLABORATION

The structure of Ubisoft, with its many global studios all working together as one, is a fascinating one. **Jem Alexander** speaks to the heads of the publisher's Southeast Asian and Chinese offices about their roles in the great Ubisoft machine and how global development works

Even when the credits roll on an *Assassin's Creed* game, revealing half an hour's worth of Ubisoft employees from across the world, it's hard to truly grasp the scale of the publisher's global development presence. Once you begin to look further into the Ubisoft structure and the number of studios it has to its name, it's impressive to see such a network of collaborative offices working together to create games. Across continents and across time zones, studios on opposite sides of the planet are coming together to create the next *Assassin's Creed*, *Far Cry*, et al. By all accounts it shouldn't work. And yet it does.

> **This company is very entrepreneurial, so they are always exploring where to go next**
> *Chip Go, Ubisoft Philippines*

Among them are a cluster of studios in China and Southeast Asia. Founded over the last twenty years, they now work together to help create some of Ubisoft's biggest games or, more recently, develop their own IP. Ubisoft Singapore, founded in 2008, has just announced *Skull and Bones* at E3 after years of building up expertise in maritime physics and combat.

Development of the ship mechanics started in *Assassin's Creed 3* and was a huge part of *Assassin's Creed IV: Black Flag* and *Assassin's Creed: Rogue*'s piratey gameplay. The experience the studio gained over the development of these three games allowed them to successfully pitch *Skull and Bones* to headquarters and start building its own original IP.

"When you come up with a project like *Skull and Bones*, it's a massive investment for the company," says Olivier de Rotalier, managing director of Ubisoft Singapore, Ubisoft Chengdu and Ubisoft Philippines. "We are competing in the triple-A group and that requires a lot from the company. The studio already has a track record and the team has strong credits, so that way, when you propose to HQ they can said 'Okay let's try it. Let's push this idea.'"

But as with most projects created at the publisher, Singapore isn't alone in their boaty endeavours. The Philippines and Chengdu offices are working very closely with them, thanks in part to their proximity in the Southeast Asia region. The three offices, all united under De Rotalier's management, are affectionately referred to internally as 'The Ubisoft Armada'. Truly, their devotion to ships and naval combat knows no bounds.

"Being managing director of three studios gives me much more perspective, and access to much more talent," says De Rotalier. "Much more. It allows us to build teams across studios and make them richer, because each of them is bringing something new that maybe one particular studio didn't have before, so you have more opportunities to combine and to build more ambitious projects and features."

TALENT SHOW

This focus on finding new talent to bring into the Ubisoft family is what pushes forward the publisher's apparent appetite for world domination. The Shanghai office is one of the oldest of its studios, founded before even its flagship, Ubisoft Montreal. This was an attempt to enter a new market and acquire skills that were lacking elsewhere.

"In 1996 our CEO Yves Guillemot asked me to start looking at doing something in China," says Ubisoft Shanghai managing director Corinne Le Roy. "I had a one year commitment to come here. One goal was starting a studio, but we were more looking at animation work at that time, because we didn't have software that could process in-betweens animations, so it was a lot of work to produce animation back then.

Ubisoft Chengdu's studio manager, Jean-François Vallée

It would be twelve years before the second Chinese studio, Chengdu, as well as one in Singapore, would be founded in 2008. Meanwhile, Ubisoft Philippines is the baby of the group, having only sprung up in 2015. All in a quest to find new untapped pools of game development talent.

"We went to Chengdu because on the east coast of China Beijing and Shanghai were becoming saturated in terms of the talent that you could access," says Jean-François Vallée, studio manager of Ubisoft Chengdu. "It was difficult to attract people from the west, so we decided to bring the studio to the west side of China, in Chengdu. It's part of the DNA of Ubisoft to go to these new cities, new countries, new places... Look at Bucharest in Romania, Montreal, Singapore. We go to places where we know there's a high potential for talent."

For some, it's not just an opportunity to start something new, but also to return home. "In 2008 there weren't a lot of work opportunities, so I left the Philippines to come to Singapore, like most Filipino people," says Chip Go, studio manager at Ubisoft Philippines. "Around six thousand leave every day. So I left my family, worked here, then finally got a break and was accepted to Ubisoft Singapore. This company is very entrepreneurial, so they are always exploring where to go next. I was also trying to sell the idea of the Philippines, in my own little way.

"It's been a great adventure ever since. It's great to give back to the Philippines, but it's also a chance for me to be back home with family. I have two kids, so it's amazing."

> **It's part of the DNA of Ubisoft to go to these new cities. We go where we know there's a high potential for talent**
> *Jean-François Vallée, studio manager Ubisoft Chengdu*

GROW HOME

This 'giving back' that Go mentions comes in the form of not only tapping into the talent pool of the surrounding area, but by actively growing it. This happens through partnerships with universities and by encouraging other players in the games industry to look seriously at the region.

"We were the first foreign company to bet on China, to develop a studio and grow our Chinese team here," says Shanghai's Le Roy. "EA came later and Take-Two came later, but they were mainly doing art outsourcing. From the beginning we decided to make games here. Full games. So many of the people who worked at the companies that were created later came from us. We had many experts who worked for us who work in the industry and we still have contact with many of them. Because of that, in this industry we are considered to be a pioneer and as one of the leaders.

"It was tough at the beginning, but when you face tough situations like that, you work even more and you put in place more systems of delegation, training people, having experts coming from different studios in Ubi to support us here and I think no other companies did that."

Chengdu's Vallée sees this as incredibly important: "We're in an industry that's very specialised. When we arrived in Chengdu there was no big gaming industry yet, so we took part with the local universities. We worked with the local government and they were very excited to have a company like Ubisoft coming to their city. We toured all the universities, local press came, they were pretty happy to see a global publisher coming in there. We would go to universities and teach class.

"They didn't build a full program, but we built a few classes in programming or game design or art. This helped us to attract people who are passionate, because when people work in the games industry, people are super passionate. People in our industry come because they are attracted by games, the universes that

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Corinne Le Roy, managing director of Ubisoft Shanghai

you can build, the skillset that is required, the culture and so on. We came because we were interested in local talents, so we weren't here with an objective of taking advantage of the city, but we were really going there with the objective of building our capacity, building talent."

CARVING A NICHE

Shanghai is now a major producer of art assets for games across Ubisoft's entire business, but it is also co-developing two major titles: *The Crew 2* and *Far Cry 5*. 'Co-dev' is a level above just producing assets for a title, but means that the studio is making decisions on features, content and story.

"In co-dev we are creating the entire game, the entire missions, the features related to the game," says Shanghai's Le Roy. "If we are doing a portion of the game with some specific gameplay, we are doing everything around it."

The Shanghai office doesn't share Singapore and the rest of the Armada's devotion to ships, but instead has its own expertise. Wildlife.

"We started on *Far Cry 3*," says Le Roy. "We were asked to work on the wildlife, but in the beginning it was just the cosmetic elements in the game. The team in Shanghai started to work on more interactions between the animals themselves, between animals and the characters, animals and the environments, etc. The first version they did was shown to Montreal and the editorial team in Paris said 'we want this as one of the key features in the game', so we put more people on that and worked more on this.

"The team working on the animals here, it's a lot of AI engineers, animators, technical directors, character artists. People who work on the fur and the behaviour of the animal to make sure it's as realistic as possible, and we have a big team of game designers. We even have a game director working on this, interacting with the game director in Montreal and Toronto on what the animals will do in the game and so on. Today the wildlife in *Far Cry* is the most developed wildlife we have in any game in Ubisoft. And any game, we think, in the video game industry. Because animals are totally integrated into the gameplay."

> **Today the wildlife in Far Cry is the most developed wildlife we have in any game in Ubisoft. And any game, we think, in the video game industry**
> *Corinne Le Roy, Ubisoft Shanghai*

It doesn't stop there, though. Shanghai is also developing two full DLC releases for *Far Cry 5*, which are entirely made at the studio, from concept to execution. "We are producing 75 per cent of the season pass," says Le Roy. "So we are in fact producing games. Full games. It can look like maybe co-dev is pretty close to art outsourcing, but no they are creating games. Why is the season pass being done here? It's a way for us to have autonomy. We are 10,000km from Montreal so we need to find ways so that it's easy for us to work.

"I can't tell you more about the DLC, but you will see that it's, wow, a totally different way of playing *Far Cry*. With all the ingredients of *Far Cry* but in something very different."

So what is the secret to collaboratively making games with studios half a world away? There's no magic solution, sadly.

But communication is key. "When working on the list of animals in *Far Cry 5*, Shanghai will propose something and Canada will propose something and we will interact together until they find the final list. Based on the final list we look at the first one and create prototypes. It's a work of basically daily interaction."

HIRE AND HIRE

Ubisoft's quest for the best talent on the planet will never be complete. Having visited both the Singapore and Shanghai offices, there's a strong feeling of multiculturalism and diversity. It's common for people to move between the many offices for short-term projects or a longer-term career advancements, and all offices seem to be on the lookout for new blood, no matter where they're from.

"Yes, we are looking for talent, but the number one thing we do is we build teams," says managing director Olivier de Rotalier. "So we need to find a team that will mix, that is what we are building on in the long term, so we need to find people whose DNA will fit together. We are exposing people to different projects so that they get the experience to work together, so that they build their trust together. Sometimes it fits and sometimes it doesn't fit in one team, but it fits in another team.

"We are always interested in senior expertise, people bringing their experience, especially in online games and games-as-a-service. In Singapore we are building a very ambitious game-as-a-service, and any strong experience that could support what we are building at the moment would be interesting. From online programmers, online architects, UX designers. But in the end, every person with a strong energy, positive attitude and a will to push and to challenge themselves will always be welcome." ■

QUALITY DRIVING

Even if you know how a car drives, would you know what to test to make sure a videogame captured it accurately? **Sean Cleaver** speaks to Slightly Mad Studios' Stephen Vilioen and Rod Chong about how Project Cars 2 'handles' the pressure of getting the worlds most exclusive vehicles accurate

Testing a game like *Project Cars 2* is an unusual process compared to most. Of course, there are some things that will always be familiar in games testing – bugs, glitches, graphical issues, memory leaks, etc. But with a simulation you aren't just testing to make sure it works, you're also testing to make sure it's as realistic as possible.

In fact its fair to say that QA and testing is inherent in building a racing simulation. "There's so much of it right from the get go," says Stephen Vilioen, game director for *Project Cars 2* developer, Slightly Mad Studios. "Instead of 'QA'ing' a gameplay experience you have to QA the technology behind it."

Project Cars 2 is built using an in-house engine and testing isn't just reserved for the cars or the track. A lot of that detail has to be known by the testers before they can make sure that the quality of the game is accurate. "The technology has to be tested independently of the specific environment (like a track) and it has to be tested per environment as well. There is so much detail that falls out of the level of detail assimilation.

"The simple example is our spectators are dressed based on the weather, based on the seasons and then based on the era, and QA has got to pay attention to that. From our perspective, with my team working on the game design and specifying all that detail, we've got to make sure that the documentation that we handed over to QA is thorough enough that they know what to check for. Then the QA team has to pay attention to all of those little details. It's not something that you typically find in many games or simulations."

Another example of this is the pit crew in the game. With *Project Cars 2* being a sequel, there are already some things in place that will help testing but the others, like pit crews and pit stops have not only been entirely redesigned and animated, but they have to be accurate to the rules of the racing formula they are in, but also the era that they come from.

"If you go and do a pit stop while in the 1970s cars, the pit crew will be dressed like they would have been in that era. We can't assume QA would know that, right? We can't expect them to know that. It's just a level of detail that a general QA team simply wouldn't know. But that is one of many very important details that recreates the real world as close as possible."

TESTING REALITY

You could argue that because testing and quality is so inherent to the make up of *Project Cars 2* that QA probably isn't the right phrase. "I don't know if we would call it QA," says chief commercial officer Rod Chong. "But there's certainly a feedback process that we go through with the drivers or with people that are focused on authenticity. We have to look at each car and ask ourselves the question:

'Does it sound like the real car? Did we capture the car or is it wrong? Does it handle like the real thing? Have we captured the essence of the car?'

"Like a Porsche 911 for example, with a rear engine, has some very particular handling characteristics and ways that you drive it which are quite unusual. We have to always be going through these feedback processes to try and strive for realism and authenticity and that's a continuous process."

One of the ways that *Project Cars 2* has achieved the realism it has in the handling of the cars is thanks to the input of real drivers. Slightly Mad Studios currently has 7 full time drivers working on the game. Names such as stunt driver and former *Top Gear* 'Stig', Ben Collins, and former touring car driver Nicholas Hamilton have contributed heavily.

"We did two physics sessions with Stefan Johansson who was a *Formula 1* driver in the 1980s, but he's raced a wide variety of cars from the 1970s to the present day. So we spoke to him about his racing career and understood what cars he raced in what eras. Then we did tests where he drove about seven or eight different cars, all stuff that he's driven and he gave us a lot of feedback.

"There were a couple instances where he drove a car and he said, 'you've got this wrong.' Like the Porsche 962C. He drove it and he said, 'no this doesn't feel right. You've got castor wrong.' He said, 'we ran this amount of degrees castor angle on it. Go back. Fix it.' So we changed it."

It is incredible that regardless of time, a driver can recall exactly how a car feels from memory. It's even more incredible that a video game can capture that and present it to the driver authentically. It's a testament, not only to physics or the improvement in game controllers like steering wheels, but also to the dedication to testing and quality from Slightly Mad Studios.

"The level of simulation now is so sophisticated that you can actually feel everything that's happening," says Rod Chong.

"You can feel the tyres, you can feel the suspension geometry and you can really sense what's happening with the car now. For people that are highly technical, like these racing drivers, they can drive the car in the simulation and then know what has to change and give a list to the programmers. Then they can continue to evolve the physics and the handling characteristics of the cars."

VINTAGE GARAGE

Racing games in this era of game development get more from car manufacturers than ever before, but historic racing is a much more difficult prospect.

"When you have the modern cars, most of them have driven on test tracks or on race tracks," says Chong. "They could be the same tracks and so we had laser scanned millimetre perfect versions of those, so we can get a data trace of the car going around a circuit.

"But when it comes to things like the older cars, some of which may not have been driven 20 years... What you don't want to do is have a game designer, sitting at their desk thinking 'Oh okay, Ferrari. How should that handle?' And they've got some sliders to add oversteer, top speed, grip, downforce, etc. For us, this is unacceptable. We have to simulate whole aspects of the car, and that's what we did. That's the starting point."

"We have this vast resource of data available," concludes Vilioen. "But how you get that to the point where it's accurately representing in the simulation, that's the secret sauce." ■

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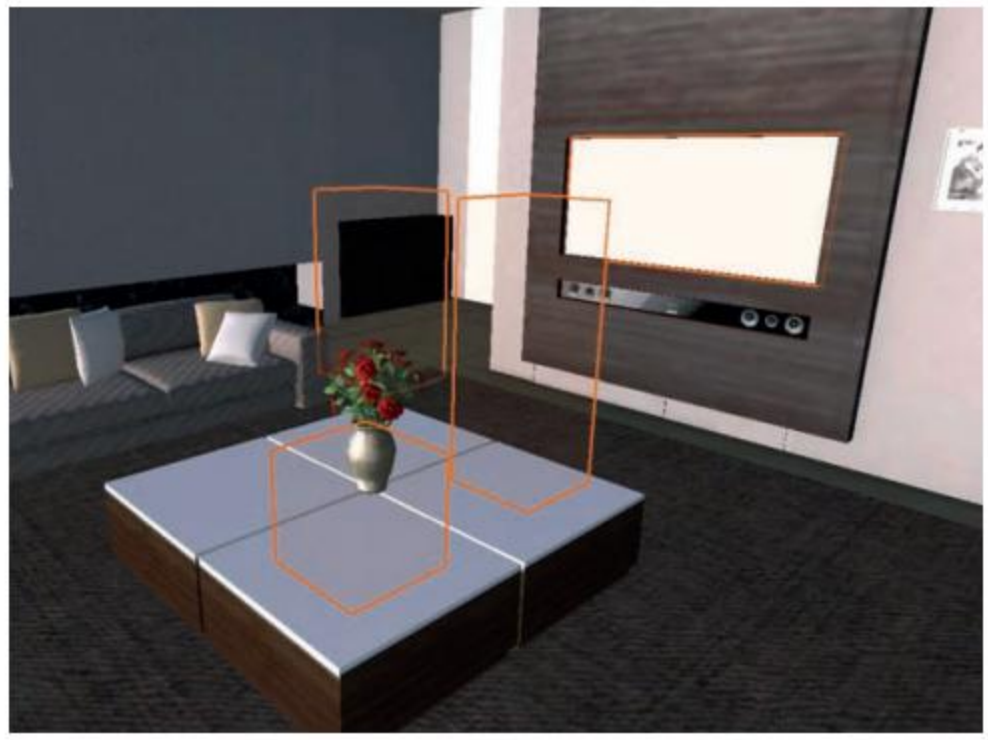
VIRTUAL ADVERTS

With any new medium, advertising causes economic growth. With VR however, that's harder to accomplish in a non-intrusive way. **Develop** speaks with Advir CEO, Samuel Huber, to see how the company is working around the issue



It's no secret that VR, and especially AR, will shape the way media and entertainment is consumed in the coming years. Already we can see the way that sports and esports are using the platform to get viewers to the centre of the action.

This in turn means that advertisers need to find ways of getting their products in to these experiences in order to capitalise on the platform.

Advir is a company that is not only working on a solution, but is doing it in a non-intrusive way. With a free plug-in, the company 'indexes' potential places in a game that can be used for advertising, like a billboard for example, and sells this inventory of indexed areas to advertisers. If you think of a billboard company like JC Decaux or ClearChannel, Advir intend to be the VR and AR equivilient.

"The goal is to create new standard for advertising, including 3D products," says Advir CEO, Samuel Huber. "We work with Google, Yahoo and other companies to establish new standards for advertising. We also created a VR pledge, which is more of a moral commitment against intrusive ads."

Video games have been rife with product placement for many years, occasionally earning criticism. But with VR and AR, intrusion is not only an issue but one that can really affect the experience.

"We have this mentality that by giving control to the developer, they say 'the ads will be here' and will place them in a certain area or moment. They're generally quite protective of their content, so they wouldn't ruin it with a massive banner. It's kind of self-controlled, in a way.

"If you don't do that, users are not going to use your app. The tolerance for disruption in VR is very low compared to the web. On the web you can just close a window, you can look at something else. Here, you can't."

By selling the spaces to other advertisers, Advir need to work with both the advertisers and the developers to make sure that virtual worlds are not broken.

"There's control on both ends. They can say 'I don't want any gambling advertisers', but the advertiser can also say 'I don't want to advertise in football games'. The long term view is that, with artificial intelligence, we can recognise what type of content it is and match it with the right advertiser."

At the moment Advir is only available on Unity, with Unreal support about to be developed and further support for other engines in the future.

> **The tolerance for disruption in VR is very low compared to the web**
>
> *Samuel Huber*
> *CEO, Advir*

Around 100 developers are currently working with the company and Huber believes that the advertising potential will grow as the medium matures.

"We have advertisers who come to us and say 'okay, we want a campaign that does two million impressions' and there aren't enough people in VR to do that at the moment. Advertisers always want to reach their audience. That will never be a problem. We need the industry to grow, and do it quicker."

For developers, ad revenue from the free plug-in is not the only benefit to using the service. "We provide analytics, which are very detailed heat maps of where people are looking" says Huber. "You can replay where a player has been moving. You can aggregate all of that per session. Maybe a developer creates a room and no one goes in it, you can figure out why someone isn't doing that. We connect to Cognitive VR, which is the leader for VR analytics and by using our solution, you also get theirs."

With the desire to be non-intrusive, Advir also set up a VR pledge with another analytics company. "It is a commitment against intrusive ads, which is kind of the public version of the advertising committee we are working with behind closed doors. We have fifteen members, like Orange and Yahoo and a few VR studios. It's kind of a badge that you can say 'I commit to not ruin VR', basically."

Even though advertising in VR has been done before, there hasn't been a system that really provides accurate targeting. "The reason this didn't take off so well in the past was that, in the backend, ads were not able to be served properly or you couldn't target the right person. Now with ad tech being what it is, we're really able to target. We know what you like because we have access to a lot of data. We can cross-promote with the web as well, so we know what you looked at and retarget you in VR with a 3D placement of that.

"The dangerous thing is, for example with social VR, where you have multiple people in the room at the same time. It's almost an existential question. Should they see the same thing or shouldn't they? That's something a developer can decide if they want a unique placement. But if it's a game where you're on your own, you and I will see different things." ■

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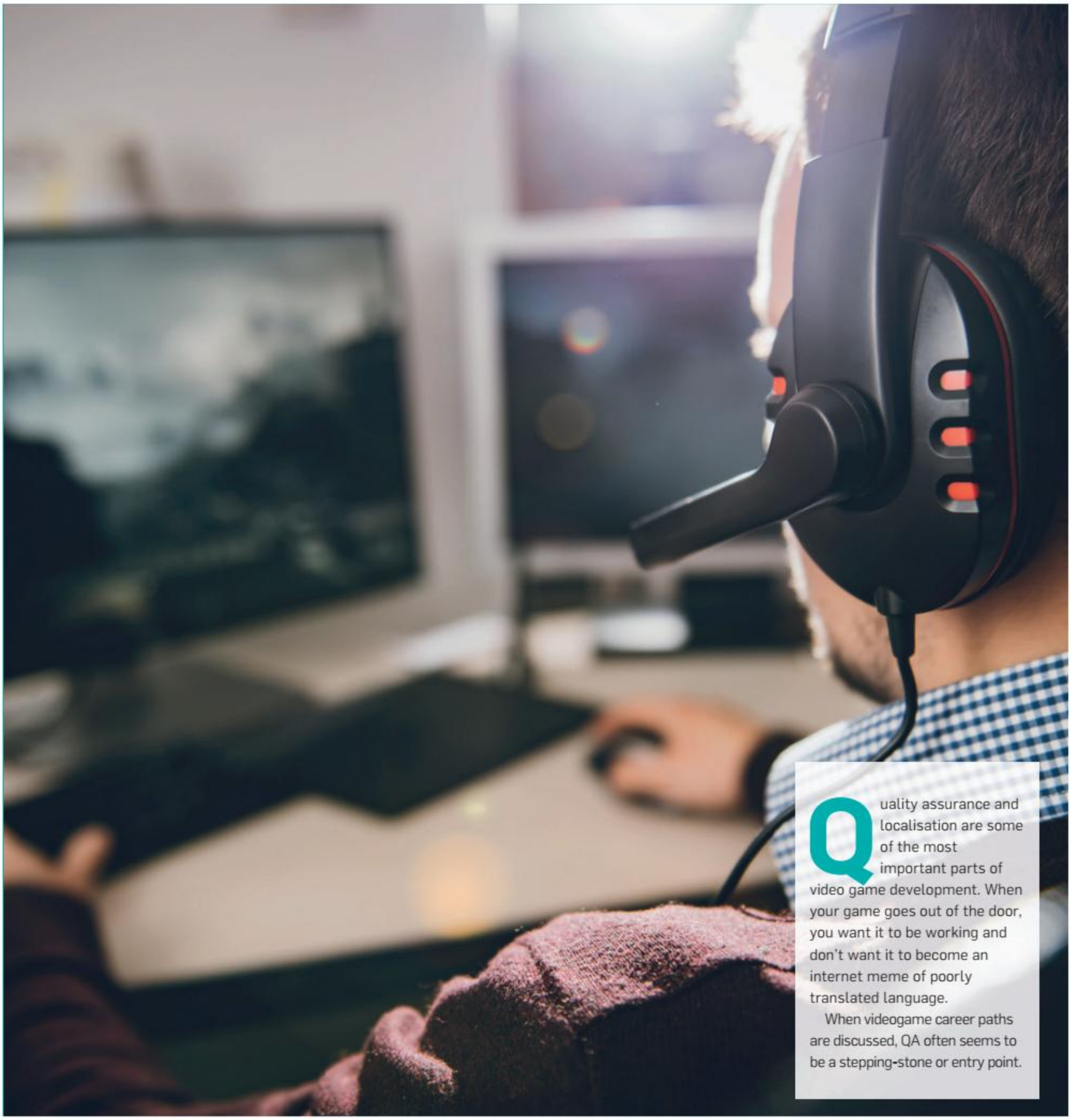
QUALITY CAREERS

It's been seen as a career entry point and, by some, even a late-stage afterthought of development, but QA and localisation are vital parts of the development process. **Sean Cleaver** speaks to those in the industry to find out how perceptions have changed about this area of the business



Quality assurance and localisation are some of the most important parts of video game development. When your game goes out of the door, you want it to be working and don't want it to become an internet meme of poorly translated language.

When videogame career paths are discussed, QA often seems to be a stepping-stone or entry point.

(L-R) Gaelle Caballero from Testronic Warsaw, Thomas Knee from SpiritAI

It's certainly a great way to get in to the games industry.

"I was living in San Diego at the time with my dad who wanted me to get a job," explains lead QA for SpiritAI, Thomas Knee. "I applied on craigslist to be a video games tester and also applied to work at Subway sandwiches. I got offered interviews for both on the same day. I went with the video games tester one and started working there as a QA tester, it was one of the most fun jobs I ever had."

"A long time ago, after graduating, I came across a games tester job at a small publisher and it immediately appealed to me," says senior QA manager at Creative Assembly, Graham Axford.

"When I was a child I'd worked hard to save up for a Spectrum 48k and had level edited games on and off since then. So, my first job was as a temp games tester. I was one of two testers, working on Amiga and PC titles. It wasn't long before I was covering customer service and QA in this small company – that's how it was then, you got involved with whatever was needed to get the job done."

For Tiia Pukero, senior QA analyst at Rebellion, it was transferrable skills from other jobs that opened the door. "I've always had a passion for video games and having previously worked in a technical customer service role got me more interested in the QA side of things."

"I started in the QA industry by accident," admits LQA manager for Testronic Warsaw, Gaelle Caballero. "While searching for marketing and legal work I was headhunted by recruiters based on my multilingual skills. I started on a short term contract for Testronic's LQA team in London. After a few months I was promoted and offered a permanent contract as LQA Lead."

> **The atmosphere, the projects and the company fit together oh, so perfectly. I couldn't be happier**
> *James Cubitt, QA Manager, Universally Speaking*

Progression is important in the games industry. As games evolve and develop, so too do the skills required for the industry. QA is no different and many choose to make it their priority. "I've always had a passion for all things technology related and have always had an analytical mind," says SpiritAI's Knee. "After a couple years at PlayStation I moved into more technical QA at other companies and decided to stick with it as I was enjoying it."

"Chasing the dream," jokes Universally Speaking's QA manager, James Cubitt. "A real tale of career progression up the ranks. Over the last 11 years I have gone from QA temp to QA tester to QA lead to QA coordinator and then to QA manager. The atmosphere, the projects and the company I was working for all seemed to fit together oh, so perfectly. I couldn't be happier; I am doing the job I love."

"I have always been drawn to the creative and technical," says Creative Assembly's Axford. "However, I'm one of those people who just didn't really know what I wanted to do. I left university with an Applied Science BSc degree in '92 and found it incredibly hard to get a job. I was in and out of work and did various things from filing to traffic surveillance, even geological well logging. I was interested in the games industry and when I spotted a QA opening, I knew that could be a good way to start out, especially as I didn't have a specific development background."

"I would be lying if I said it was my ideal career path originally (largely because I wasn't aware it was a sustainable one)," admits lead QA at Fuse Universal, Paul Foy. "But it has given me the opportunity to work with a lot of different companies, colleagues and technologies across the years. I always wanted to work with software and games so QA was my path into it, and luckily it turned out I was pretty good at it."

There are many positive things when it comes to taking the QA career path, as Rebellion's Pukero explains. "Choosing QA as a career means I'm learning new things almost every day, new games, new platforms and new problems which keeps it fresh and interesting. Just this last year Rebellion's QA have worked with three VR platforms, multiple consoles, PC and mobile. It's not just games either, we test the company web platforms and even the 2000 AD comics app. The job requires a lot of patience, an eye for detail and plenty of organisational skills, which I like to keep improving."

QUALITY EMPLOYMENT

QA, as we have said, comes with a bit of a negative connotation, but really, does it deserve it? By all accounts, working in QA is rather enjoyable.

"Games are a great example of where creativity and technology merge, says Creative Assembly's Axford. "And that's an exciting place to be. There is continual change and evolution, and that occurs in QA too. "The part of QA I enjoy most is the investigative side of it," says Fuse

Universal's Foy. "Trying to find the root cause of an issue or trying to discover those very specific steps to reproduce a problem or a tricky bug is strangly satisfying, and it's fun acting as a puzzle or problem solver." "Unforunately, it does tend to mean that you accidentally come across and spot bugs on almost any site you visit in your day-to-day browsing outside of work."

There is a joy and a satifistaction then in overcoming problems, but for others variety is the spice of their QA life. "Every project is always different and being able to communicate directly with developers about the issues we find gives me a better idea what I should be looking out for," say Rebellion's Pukero. "That makes my job not only easier but also more interesting and enjoyable. In the end, I help make games better for our community and that's satisfying"

For Testronic's Caballero, one of the best things is one thing the games industry can often miss out on - a clear career path. "Testronic is a great employer," she says. "It identifies talent and helps develop employees in the direction that is right for the individual. Testonic has helped me understand that QA is the right fit for me and my personality."

"Getting to be part of a team that makes today's biggest gaming titles as good as they are is very rewarding," adds Universally Speaking's Cubitt. "We get to see and test some incredible games before they hit the shelves, which is always a big bonus. I feel very privileged. And from a team perspective, one of the best things is testing the multiplayer component of games. Competition in the office is always a good thing."

OVERCOMING STIGMA

It's not a secret that QA has a stigma, because it is so often used as an entry door to the industry and, typically, it hasn't been high on the priority list for developers. However times and priorities are changing. "Unfortunately QA isn't a priority at a lot of companies who could treat their QA staff better," says Pukero.

"So perhaps when people think of QA they think of low pay and no job stability or progression, but this isn't the case at Rebellion. Here we're also directly involved with each game team, work face-to-face with developers who listen to us and have a real impact on the games."

The change in opinions is something both studios and outsources have noticed. "Historically, QA was considered a late service in the production process and as such was regarded with less importance than it is today," says Testronic's Caballero. "Nowadays, QA is more respected and understood due to the longevity of developer and QA integration, early engagement, live operations, DLC and the power of social media. QA is now more important than it has ever been and far more respected in the industry. Here at Testronic, we value the virtue of communicating and raising awareness of the importance of QA. A game that is launched after good QA is more likely to keep the users engaged in a competitive marketplace. Bad QA or lack of QA will interrupt the user experience and potentially drive away your user base."

"Some people still have the very outdated view that QA is an unskilled job suitable for any general gamer and therefore have lower value compared to other games jobs," says Creative Assembly's Axford. "Alongside this, there has been an historical lack of respect for QA staff. This perception is fortunately not the view of Creative Assembly.

"These days computer games can be amongst the most complex things you can create, and therefore complex to test," Axford continues. "This is especially true with deep and complex triple-A titles like the Total War franchise. In the past I often heard the phrase 'so you just play games all day?' but thankfully, I don't get that anymore and that positive change is being seen right across the industry. QA tasks can be specialised and their work needs to be respected across the dev team, leads and senior managers, to achieve the best outcome for the game."

"In today's digital world, where everything is a tap away, games are constantly becoming more and more accessible to the world," concludes SpiritAI's Knee . "This in turn means the standards are also rising. I think strong QA is vitally important for this. I've been in forums or in a Facebook comments thread where people are annoyed after a buggy game releases and there is a massive day one patch release. If I could help prevent this from occurring, I would be happy in my work and also be a very happy gamer." ■

MOVERS AND SHAKERS

The latest high-profile hires and promotions

PLAYSTACK

Mads Jensen has joined PlayStack to become company director and COO. Jensen, who founded the Sefaira software platform for engineers in 2009, comes on board to help plan a technology roadmap for the UK-based publisher.
"I believe this business has all the ingredients to be a game changer for the industry," said Jensen. "A team with an outstanding CEO, incredible talent, superb track record and a far-reaching vision in an exciting and rapidly growing market. PlayStack has the potential to the next London unicorn."

SEGA EUROPE

Chris Bergstresser has become COO and president of Sega Europe following the departure of Jurgen Post. Bergstresser was previously with Miniclip and also Atari. "With the road to 2020 mapped out by Sega Sammy, all areas of the business must work closely together to drive continued success and innovation. I am looking forward to the challenge."

TENCENT

Joining Tencent as president of international partnerships for Europe is Jurgen Post. Recent Tencent investments in European, and espiecally UK, developers has required an increased focus on the region and Post will be responsible for these partnerships. Frontier Developments and Milky Tea studios are some of those studios that Tencent has invested in.

UKIE

Trade body Ukie has announced three new team members this month. Vanessa Joyce joins from TIGA to become corporate relations and strategic partnerships consultant. Women in Games CEO Marie-Claie Isaaman becomes a diversity and education research consultant and finally Laura Martin has joined the Digital Schoolhouse programme, powered by PlayStation, to help its nationwide expansion.

GET THAT JOB

This month: Beoniot Provot, LQA Project Manager, Testronic Warsaw

What is your job role?

I was just hired as a LQA Project Manager in Warsaw. My primary role is to make sure that projects given by clients are completed within the time and budget allocated. In order to do that I have to make sure that the team is ready and test design finalised (all documents provided by the client are understood, test plans are ready, access to bug database, etc).

The PM has a client-facing role; I am the main point of contact with the client. My role is to keep them updated with progress as well as challenges met by the team. Creating and maintaining a good relationship is essential.

The second aspect is mentoring and developing the LQA team. This includes regularly evaluating individual performances, and managing appraisals with the testers.

Lastly I strive to improve testing processes, and produce metrics/KPIs for reports, both internal and for clients, to help improve workflow, and best practices.

What qualifications and/or experience do you need?

I previously had experience in delivering projects, with client facing and team management and mentoring.

All of this was indeed in LQA but also in FQA. In my new position I work with technicians on-site but also with remote teams based in London.

I also gained experienced in working with teams and clients from different part of the world, which meant I had to adapt to different cultures and behaviours.

I come from a scientific educational background and also have a personal interest in computing and gaming.

After joining the games industry I also had an opportunity to get the ISTQB certification.

> **Creating and maintaining a good relationship is essential**

If you were interviewing someone, what do you look for?

For a similar position to mine, I think the essential qualities are problem-solving skills, reactivity and the ability to adapt quickly and pro-actively. Obviously an experience in the games industry and localisation is a must at this level. Multitasking is definitely a plus.

Also personality is important as I believe that being curious will push a candidate to continue personal development. Being a natural born team player and good mentor is also an asset in an industry which employs a large number of young people.

What opportunities are there for career progression?

Management skills can lead to many other positions, inside or outside gaming industry.

The next logical step would be QA Manager, or Assistant / Junior Producer.

SKILLS AND TRAINING

This month: We look at the new course at 16-19 academy East London Arts and Music, in partnership with Creative Assembly

Overview: ELAM 16-19 Academy BTEC level 3 extended diploma in games design
Address: 45 Maltings Close, London E3 3TA
T: 0203 488 2458
E: info@elam.co.uk
W: www.elam.co.uk/games-design

By the time this goes to print, many thousands across the country will have their GSCE results. Some may already be thinking about a career in game development. Many institutions offer game design at a higher education level but what if you're straight out of secondary school?

The East London Arts and Music Academy (ELAM) is a 16-19 Academy that is mostly known for courses in media and entertainment. Now, it is offering a BTEC Level 3 extended diploma in Games Design. What's more, it's run in partnership with UK developer Creative Assembly making this the first industry led course at this educational level.

"The UK games industry is currently the 6th largest in the world, employing around 25,000 people," says ELAM principle, Charlie Kennard. "Yet the education system is not preparing students with the specialist skills the industry requires. Creative Assembly join other ELAM partners, including Universal Music UK and Abbey Road Studios, to give trainees the opportunity to regularly engage with the industry and gain a level of professionalism, raising the standard of undergraduates before university."

The new course will help to teach students how to make a game. In the first year, students will create an indie game from scratch for mobile. Using either Unreal or Unity engine, students will see a project taken to completion from concept, 3D modeling, scripting and even testing.

For the second year, students will be harnessing their skills and preparing for the next step of their games careers, whether that be with a developer, solo or further study.

Aside from the engines, students will have access to software such a 3DS Max, Photoshop and After Effects, preparing them for the every day challenges in the industry.

Creative Assembly will also be helping the students with mentoring, workshops and masterclasses that will run alongside normal classes, making the topics taught on the course a truly industry-developed curriculum.

For Creative Assembly, this is seen as a way for the industry to engage at a younger level and address the skills shortages that education doesn't cater for with those age groups. "As a leader in the UK games industry we are committed to educating the future games development talent of tomorrow, and driving innovation through diversity," says studio director for Creative Assembly, Tim Heaton. ■

RECRUITER **HOT** SEAT: **SEISMIC GAMES**

HR generalist for Seismic Games, **Heather Hughes**, talks about the studio staying as indie as possible while building a dream company

What differentiates your studio from other developers?

Seismic Games focuses on delivering high production titles on mobile, VR & AR platforms. Over this next year we are launching a number of exciting licensed games in collaboration with some truly great entertainment companies. As a studio, we actively foster highly collaborative environments; all of our employees are major contributors, and feel invested in the company's growth. We focus on team building, and during the recruiting process we examine how an individual contributor can help grow our different teams.

How many staff are you looking to take on?

During 2017, we'll increase our headcount from over 50 to approximately 80 employees. We will eventually expand to about 100 employees.

What perks are available to working at your studio?

Our perks are generally centered around professional development and play. There's some fluidity among our various projects, so employees don't end up feeling stuck doing the same thing for months on end, and they have opportunities to acquire new skills. We create mentorships by pairing new hires with more seasoned employees. We also host employee events such as game nights, movie outings, happy hours, escape rooms, and the like.

All of this in addition to employees receiving our great medical, vision/dental programs as well as an opportunity toown options in the studio. We're big on experiential perks.

What should aspiring devs do with their CV to get an interview?

Keep your submissions concise and clean. For example, don't self-assess (as in indicating four out of five 'stars' for a specific skill set); we'd do that over the course of an interview anyway. Putting it on your resume gives the impression that you're simply trying to fill space. If you don't have much experience in the industry, but still want to apply for a junior role, demonstrate your love of gaming by detailing side projects.

CURRENTLY HIRING

Company: Seismic Studios
Location: Los Angeles, California, USA
Hiring: Engineers (Junior, Lead and Unity)
Where to apply: http://www.seismicgames.com/#careers

What advice would you give for a successful interview at your studio?

Arrive prepared. If you're an artist, bring your portfolio and devices with your demo reels queued. If you're an engineer, you'll likely be asked to do whiteboard work, so practice explaining your work. During our interviews, we're assessing your skills and experience to see if it makes sense to add you to our team. We're not sitting here judging you as a person, so if you flub, don't feel embarrassed! Laugh it off, or take a minute if you need to, and then keep going.

What impresses in an interview?

What impresses us is passion for games... not just enthusiasm, but actual passion. Have strong opinions, follow Twitch streams, play competitively, and obsess over design and gameplay. Everyone here has a unique set of skills, but what unites us is our love of games.

> Everyone here has a unique set of skills, but what unites us is our love of games

And what doesn't impress?

Interviewees who haven't made an effort to learn about who we are, or who list skills on their resume for which they are not prepared to be tested on.

How have your recruitment needs changed at your studio?

We added three (unannounced) projects earlier this year, and rapidly went into high gear for recruiting. It's been a demanding period for our hiring managers, who are uncompromising when it comes to the level of talent we're seeking. Sometimes that means waiting a little longer than we'd like to fill a role, which can be frustrating, but we're committed to hiring the very best people for our teams.

Why should developers join you when indie and self-publishing have become so much more accessible?

Seismic IS indie stock. While many of our employees have worked for major publishers, they have also worked for and even risen through the ranks of independent studios. The executives and team leaders here are seasoned; they've learned from others' mistakes what business practices to leave behind (such frequent crunches that lead to employee burnout), and are focusing on building their dream company.

We consciously develop company culture that fosters a collaborative, tenacious, and playful environment. It's important to us that our employees are able to carry that wildly creative spirit into other areas of their lives. ■

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ASK AMIQUS

Liz Prince, business manager at recruitment specialist Amiqus, helps solve some of the trickier problems job seekers currently face in the games industry

Q How do studios approach QA and localisation before release?

When a good job has been done on QA, no-one notices. But when it goes wrong it can make headline news. Quality is part of the bedrock of a robust and reliable technical product whereas localisation quality facilitates enjoyment for your audience in any corner of the globe.

A challenge in recent years has been the increasing use of an early-access launch. New hardware and the advent of VR have also added to the scope, but if anyone can bring a robust, structured approach to a moving feast of game development then a QA can.

TIMING IS KEY

Ross McGhee is marketing manager at Pole To Win. As a leading provider of outsource services, McGhee has insight from a multi-company perspective. "In our experience the approach very much varies from one client to another but the consensus is that while QA tends to be involved at a much earlier stage, Localisation QA's involvement still comes in at too late a stage". McGhee is keen to get Localisation QA involved in the early stages of the design and development.

"Championing Localisation QA best practises will maximise the impact of processes and eventually drive cost and time efficiencies down. Involving Localisation QA at an earlier stage will help the team gain advance knowledge of the game structure features, enable the team to rely on the Functional QA team's expertise to identify suitable build/change list to start Localisation QA testing on and enable the team to use QA test plans to help build the Localisation QA testing schedule and plan adequately"

Richard Hylands, QA lead at Studio Gobo in Brighton agrees an early approach is also needed from a software perspective. "The approach we are taking is to integrate QA into the development cycle as early as possible. QA should understand the design and features of what it is testing at concept rather than waiting. The aim of this approach is to create software that is stable and also aligns with the design from day one. By doing this we can ensure there are no surprises later in the development cycle where defects can be costly."

> **Quality and localisation play a huge part in connecting with our global audience**
>
> *Olly Hart, QA manager, Outplay*

KNOW YOUR AUDIENCE

QA manager, Olly Hart, told us that developer Outplay takes quality extremely seriously. "So do our players," he adds. "Our games are enjoyed around the world. Outplay recognises that quality and localisation play a huge part in connecting with our global audience, which is why we dedicate ourselves to making sure that our games are great right from the initial release."

For Western developers, the five core languages that are used in commercial territories are known as 'EFIGS' - English, French, Italian, German and Spanish. "We aim to launch every game with localisation beyond standard EFIGS and this requires co-ordination and effort.

"Our process begins with a large team of dedicated in-house testers, who form a part of the game teams. This close interaction with both the developers and other testers means that a high flow of information is maintained at all times, which is vital in such a fast paced environment."

Hart also believes that the team's diversity plays a huge part in testing. "Outplay's multicultural team means that in the run up to any game launch, we have native speakers who can assist us in making our game easy to understand – no matter where you are or what language you speak."

SAME PROCESS, DIFFERENT GAMES

Daniel Flanagan from Codemasters sheds light on how the developer shapes the expansive and detailed process of QA and localisation on a large-scale. "The core portion of the in-game text is normally completed for the alpha milestone in English, at which point we would begin the translation of our target languages.

"Maintaining a consistency with the translations across title updates is key, so great care is paid to previous editions of the franchise."

Critical paths can vary under the QA umbrella depending on the feature being tested as Flanagan explains. "Localisation QA starts once we have all of the localised assets available in game. All of our localisation testing is outsourced and so the testing window isn't as broad as our main QA testing."

Following a process doesn't mean identical game experiences however, as Flanagan points out. "Each of our titles has a distinct style and feel to the presentation. We work hard with our localisation partners to ensure that these styles and the presentation as a whole is kept as close as possible and retains the highest level of quality. Maintaining a constant level of communication with all areas of development during the localisation process is a key factor to ensuring that we deliver the same level of quality across all languages."

All the studios concurred that the bridge between the developers and QA teams is key to keep the overall product on track. "We have a select few trusted vendors that we work with for translations, VO recording and localisation QA testing," says Flanagan. Working on specific franchises keeps the quality high and consistent, providing all territories with the same extremely high standards that we set ourselves." ■

Liz Prince, business manager at recruitment specialist Amiqus, helps solve some of the trickier problems job seekers currently face in the games industry

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BUILDING AR FOR IOS AND ANDROID WITH UNREAL ENGINE

Consumer augmented reality takes off with the releases of ARKit and ARCore

In June, Apple revealed how developers can tell stories, convey information and entertain in a whole new way with the introduction of ARKit for iOS. At the annual Worldwide Developers Conference (WWDC), Epic Games and Peter Jackson's *Wingnut AR* showed a table-top demonstration featuring a fiery airship battle over a remote outpost, where virtual aircraft flew over a live audience, with guns blazing in pursuit of their target at centre stage.

The spectacle left viewers in the room, as well as those watching online, in amazement.

Epic Games Founder and CEO Tim Sweeney says, "Apple's emphatic entry into this space marks the beginning of AR as a mainstream consumer phenomenon, as a market that's now ready to grow beyond a few million enthusiasts, to reach hundreds of millions and then billions."

As a result of the *Wingnut AR* collaboration, Epic immediately released Unreal Engine support for ARKit, now available in Unreal Engine 4.17. Epic continues to bring deeper integration with ARKit to Unreal Engine as the launch of iOS 11 approaches.

> **Apple's emphatic entry into this space marks the beginning of AR as a mainstream phenomenon**
> *Tim Sweeney, Epic Games*

To fuel the creation of AR content across the Android ecosystem, Google has introduced ARCore, which takes into account motion tracking, environmental understanding and light estimation to deliver high-quality AR experiences. Google's ARCore developer preview, released in August, includes day one UE support.

"High-quality AR experiences truly demand the power and performance Unreal Engine provides: realistic lighting and shadowing that match the real world, high-end cinematic tools, filmic post-processing, physically-based rendering with advanced materials, and a solid engine foundation that scales," says Sweeney.

Epic will ship early access support for ARCore in Unreal Engine 4.18, along with updates to features for ARKit. Developers will be able to access preview builds of 4.18 this month, with the full release to follow in mid-October.

"We see AR as one of the next big platforms for human-computer interaction," says Nick Whiting, Epic's technical director of VR and AR. "We're in an exciting time where the confluence of AR technology is combining with advances in rendering technology, mobile platform power, and deep learning to create something that's never been possible before. For the first time, we're able bring our virtual interactive content together with the real world around the user in a meaningful way, and that's a profoundly interesting challenge to address."

Augmented reality is the next step in the evolution of the smartphone, and Epic says that Unreal Engine developers are hard at work on many new AR experiences for iOS and Android.

"With Unreal Engine 4, one of our goals is to abstract away the differences between the specific platforms, and to empower developers to focus on creating new and exciting experiences, rather than worrying about the details of the hardware they're running on," says Whiting.

Learn more about using ARKit with Unreal Engine at ***http://epic.gm/wwdc17****, and find out more about ARCore with Unreal at* ***http://epic.gm/arcore***

For more information on Epic Games and Unreal Engine 4, please visit: www.unrealengine.com

The develop POST-MORTEM

As one of the launch titles for PSVR, Batman: Arkham VR set the standard for immersive first person games on the platform. **Sean Cleaver** speaks to game director, Sefton Hill, to find out how the project started and the creative process behind the iconic Arkham series of games

It wasn't that the game was a surprise at all – we'd seen the trade show booths and the preview videos showing people playing it – but *Batman: Arkham VR* came a bit out of nowhere. Launching for the PlayStation VR in October 2016, *Batman: Arkham VR* is a standalone Batman adventure by Rocksteady Studios designed specifically for virtual reality.

Around the start of 2015, the studio was putting the finishing touches on what was going to be the final game in the Arkham series, *Batman: Arkham Knight*, and many critics were wondering what was going to be next. It was around that time that Project Morpheus, as PSVR was then known, was beginning to make its way to into the hands of developers. "Toward the end of development on *Batman: Arkham Knight*, some members of our engine team started playing around with a couple of VR devkits," explains game director, Sefton Hill. "The game grew quite organically out of those early experiments. I think that just about everybody who really 'gets' what modern VR represents has a defining moment where they realise what the tech is capable of - and how awesome it can be.

"Once enough people at Rocksteady had experienced that moment, we quickly became very interested in exploring what was possible and what it would take to create a totally immersive VR Batman game."

BEHIND THE COWL

Designing for VR was a new challenge for everyone in the industry. For Rocksteady, there was the added

difficulty in transposing the style they were known for to this new medium.

"When we decided to go into full production on *Batman: Arkham VR*, we wanted to stay totally faithful to the established feel of the Arkham games," says Hill. "Our vision of Gotham City has a particular flavour that has evolved over the course of our games, and returning to that world for our setting helped us to focus on the kind of story we wanted to tell.

"Philosophically, the Arkham games have always been about making the player feel like Batman, and working in VR gave us the chance to supercharge that sensation in a way that was never possible before.

So, faced with this new technology, Rocksteady set about designing a game that could match the high quality bar for storytelling, without tripping over any of the legacy they had created with the Arkham series.

"When we started exploring how Batman could exist in VR, we found we really liked the idea of telling a deep, psychological mystery story. The Dark Knight's mind is his most powerful weapon, and putting players inside that mind felt like the most intimate way of experiencing his world. I think there's something awesome about the sense of presence that VR can create, and how powerful it can be in placing you into a totally different world."

BECOMING THE BAT

There are now many tales from VR development that highlight the common pitfalls for designers like redesigning assets to work in VR, tackling movement and getting the field of view right. These are just a few that immediately spring to mind. Rocksteady were very aware that the expertise they had in creating third person viewpoints for their games would need to be readdressed for *Batman: Arkham VR*.

"Working in VR from a design perspective, it's particularly important to be aware of how the player is experiencing the environment," says Hill. "It's very different compared to third-person games. In VR the player has to have complete control over the camera, so you can't directly influence where they're looking.

"We had to learn and refine a whole new set of skills to help players to focus on where the action is taking place and we spent a lot of time setting up the environments to subtly guide players. But where we lose control over the camera, we're able to gain some back through audio.

> **Philosophically, the Arkham games have always been about making the player feel like Batman**
>
> *Sefton Hill, Rocksteady*

"Most VR players use headphones, so there's a lot that we can achieve using binaural sound design to direct attention and create a more intense atmosphere. One of the most interesting things about VR versus third-person game design is how players experience events within those games."

Batman: Arkham VR is full of interesting, almost essential gaming moments (No spoilers but the ending of the game is a phenomenal experience that really utilises the VR medium perfectly). However, the game and the success of the experience rested on one moment – suiting up as the Batman.

"We had great suit-up sequences in *Arkham City* and *Arkham Knight*," explains Hill. "In both, we cut to a cinematic camera and spend 20 seconds showing the player that the bat-suit is totally badass.

"In *Batman: Arkham VR*, the suit-up isn't 20 seconds of cinematics, it's eight minutes of gameplay and it's some of the most powerful work we've ever done.

"On paper, putting on a costume in a game doesn't sound all that impressive but when you're wearing the headset and you feel like you're actually wearing the cowl, I think the experience can move you in totally unexpected ways. That's the magic of virtual reality."

Batman: Arkham VR has won many plaudits since its release, including two Develop Awards. The arrival of the game may have been a surprise to all, and it may have come out of nowhere, like the Batman himself. But for Rocksteady and Hill's team, its success is a nice reward for just trying out something they enjoyed.

"*Batman: Arkham VR* was a real passion project for us," Hill concludes. "We did it because we wanted to push ourselves and experiment with new tech. But it's awesome to think that other developers enjoyed what we made." ■

GAME FOR A LAUGH

Indie developer Byron Atkinson-Jones is going on stage to tell jokes in the name of charity. This month, he gets some mentoring advice from fellow developer Brenda Romero

On the 9th of August scientists around the world reported massive seismic activity of levels never before recorded. Don't worry though, nobody was harmed by it, there were no earthquakes or tsunamis. No, it was me screaming, something amazing and terrifying had just happened.

Whenever somebody asks my advice on how to get started in games I tell them the best way is to just start making them. I don't know why I was so surprised that the same is true of stand-up comedy. In order to learn how to do stand-up comedy you have to do stand-up comedy. Next thing I know, on the 9th of August I was copied in on a chain of emails where Imran was booking me into a gig on the 13th of September at the Angel Comedy club, on a night they call Angel Comedy Raw. (http://www.angelcomedy.co.uk/events/angel-comedy-raw-52/)

If that wasn't bad enough, at the same time Imran contacted a number of other stand-up comedy venues to get me more gigs. On the 2nd of November I will be performing in the comedy club that Eddie Izzard and Jack Dee started out in, called Downstairs at the King's Head. Look, they even put my name in the line-up (http://www.downstairsatthekingshead.com/showevent.aspx?EventID=13264) this is real.

As luck would have it, I've also been seeking out fellow game developers who have ventured into the smokey world of getting other people to laugh while not dying on a stage. There are a lot of us. Last month was the Develop conference in Brighton and one of the keynote speakers was Brenda Romero. It was one of the best keynote talks I'd ever attended. Just because somebody is famous in the games industry it doesn't mean they are a really good speaker. This wasn't true of Brenda, she had the audience captivated and laughing throughout her talk. So, not only were we getting a useful talk but we were having fun at the same time. Brenda's secret was that she had done stand-up comedy early in her career. I had to talk with her to find out more!

> **The most important tip is to get your audience to identify with you – to see themselves in your shoes**
> *Brenda Romero*

Who are you and what's your link to the games industry?
I'm Brenda Romero, a game designer with Romero Games in Galway, Ireland. I am also program director for the MSc in Game Design & Development at University of Limerick.

You've done stand-up comedy - how did that come about?
Trial by fire. I did a lot of volunteering twenty or so years ago, and as a part of that I was often asked to speak about my experiences. Through that, I met a guy who, in casual conversation, was vague about what he did for a living. Game designers are often vague, too, in order to head off the inevitable conversation where we hear every game idea the person (or their child) has had. Eventually, he coaxed out that I was a game designer and likewise, I coaxed out that he was a professional stand-up comedian. We offered a barter trade — I would teach him some game design and he would teach me some stand-up methods. We discussed this over coffee a few times, figuring out some material based on my life experience. I was to meet him at a comedy club to watch him try some new material only to find myself on stage. It was the longest three minutes of my life. Fortunately, it was amateur night. However, I got that first laugh and some applause, and that was all it took. The talks I give now at conferences all have elements of stand up in them. Those lessons about getting people to relate, engage and see themselves in your material still hold incredibly true.

I've got to do a 5-minute stand-up routine in front of the games industry next year - any tips for not dying on the night?
The most important one is to get your audience to identify with you – to see themselves in your shoes. For me, that takes a bulk of my work away. Be comfortable with your material - know that you can present it any number of ways and still have it be funny. The driest stuff tends to be stuff that's overly well-rehearsed.

As part of my coaching, my first gig is an open mic night on the 13th of September and I think it's going to be the longest 5 minutes of my life.
It will be! But just get them interested and curious and involved. ■

To donate, please visit:
www.justgiving.com/fundraising/byron-atkinson-jones

What's on?

Through a series of panels, roundtables and keynote discussions, Future Games Summit will bring together leading industry experts to help shape and define the future of this vibrant industry.

With an entire track dedicated to Developers, this event is not to be missed.

Discussions will include:

- An exploration of the impact of streaming on the evolution of game development
- Building a meaningful global community of gamers
- The next generation of narrative storytelling - maximum innovation for maximum ROI
- The power and perils of creating a prime user experience on mobile
- Talent development & retention - from indies to majors

Plus so much more! Take a look at the full agenda today at:
www.futuregamessummit.com

Day 1 Keynote Speaker announced!

Three-time Emmy Award winning composer and senior director of audio for Blizzard Entertainment confirmed as Keynote Speaker!

Russell Brower joins us from California where, for over a decade, he was the senior director of audio and lead composer at Blizzard Enterainment, developer and publisher of the World of Warcraft, Diablo III, StarCraft II, Overwatch and Heartstone franchises.

Russell's keynote will close day 1 of the conference on Tuesday 31st October!

"Any good business strives to be either first, best or cheapest at what it does. Anticipating future trends is a cornerstone in all three models - I'm proud to be helping the Future Games Summit remain the most invigorating place to find that insight."

ROB YESCOMBE, FREELANCE WRITER AND NARRATIVE DIRECTOR, ADVISORY BOARD 2017 MEMBER

"Future Games Summit will provide an essential role for all elements of an increasingly diverse market. You can never have enough information, guidance or networking. See you there."

STUART DINSEY, CURVE DIGITAL, ADVISORY BOARD 2017 MEMBER

DEVELOP LIVE GAME JAM

The Develop Live Game Jam is an opportunity for game developers (and aspiring game developers) to get together and make a game over the course of two days, alongside the Future Games Summit.

Jammers can sign up as individuals and be assigned a group, or can come with an established group. The games will then be judged by members of the games industry, with the winners receiving some great prizes!

THEME:

Man vs Nature

TIMINGS:

Tues 31st October: 8.00am – 8.30pm
Weds 1st November: 8.00am – 2.00pm

THE JAM:

6 teams
2-8 jammers per team

HOW TO ENTER:

Email htovey@nbmedia.com by 6th October to enter